

Points and Pathways of Exposure

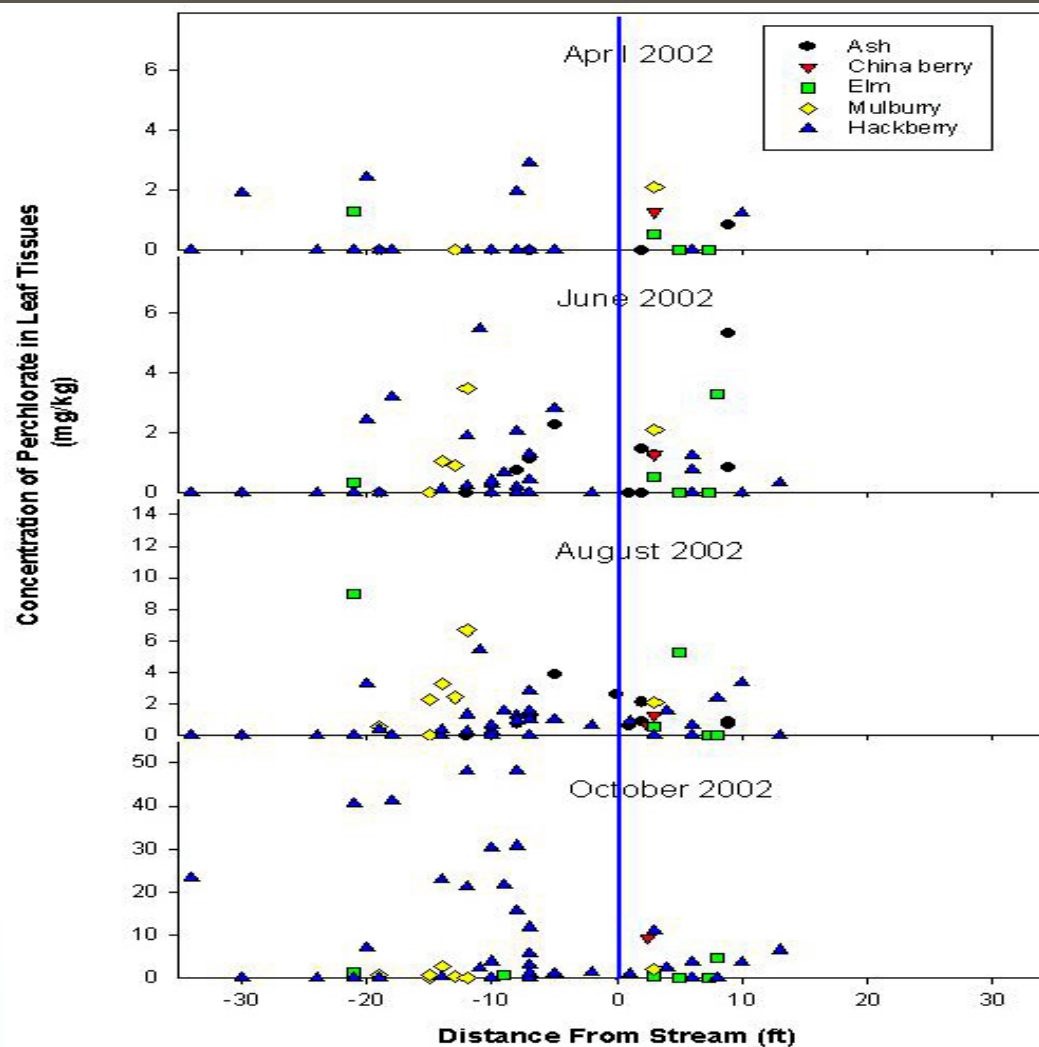
- **Water**
 - *varies with season*
- **Sediment**
 - *persistent*
- **Vegetation**
 - *perchlorate is present*
- **Fish**
 - *human exposure unlikely*





Perchlorate in Leaf Tissue

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Points and Pathways of Exposure

Current Focus

- Release of perchlorate from vegetation***
- Transformation of perchlorate in vegetation***
- Market basket-type survey***

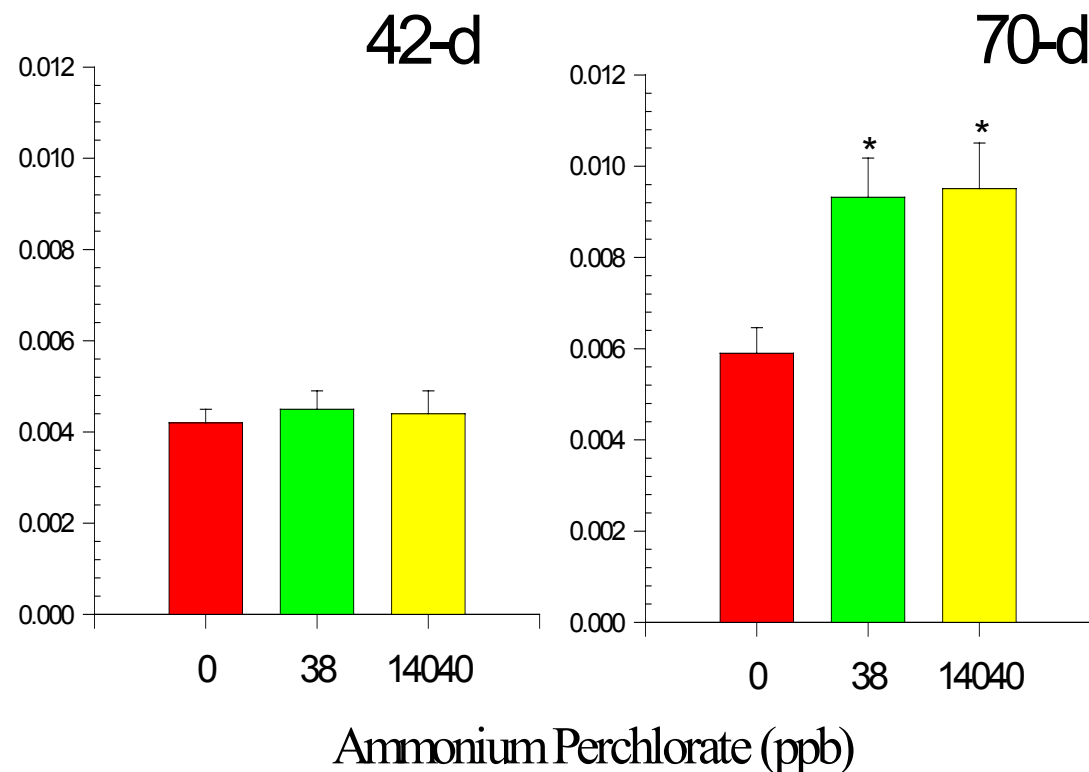


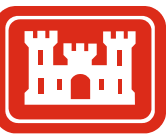


Impacts on Fish and Amphibians

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- **Frogs and Fish**
 - *thyroid histology*
- **Frogs**
 - *% male offspring*
- **Frogs**
 - *effects are reversible*

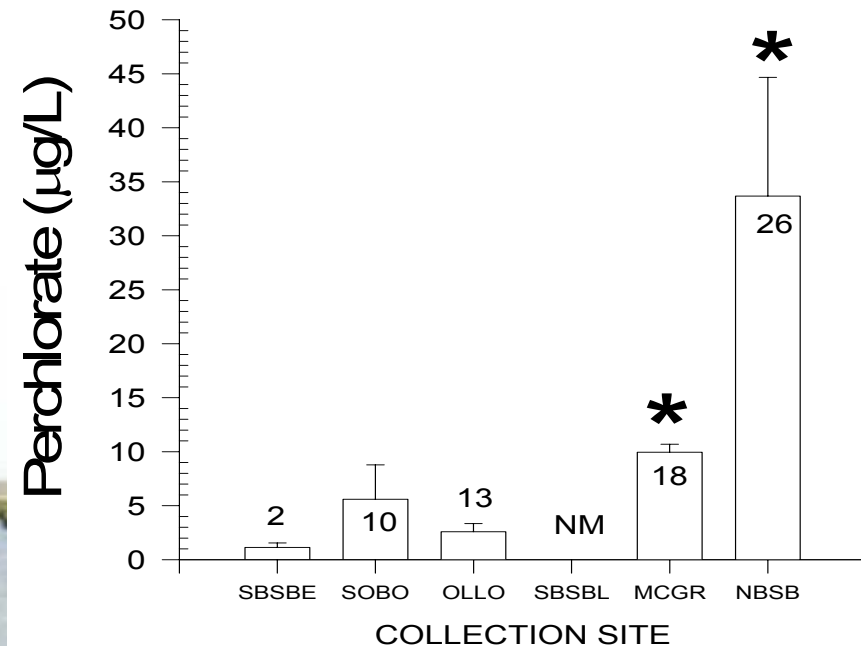
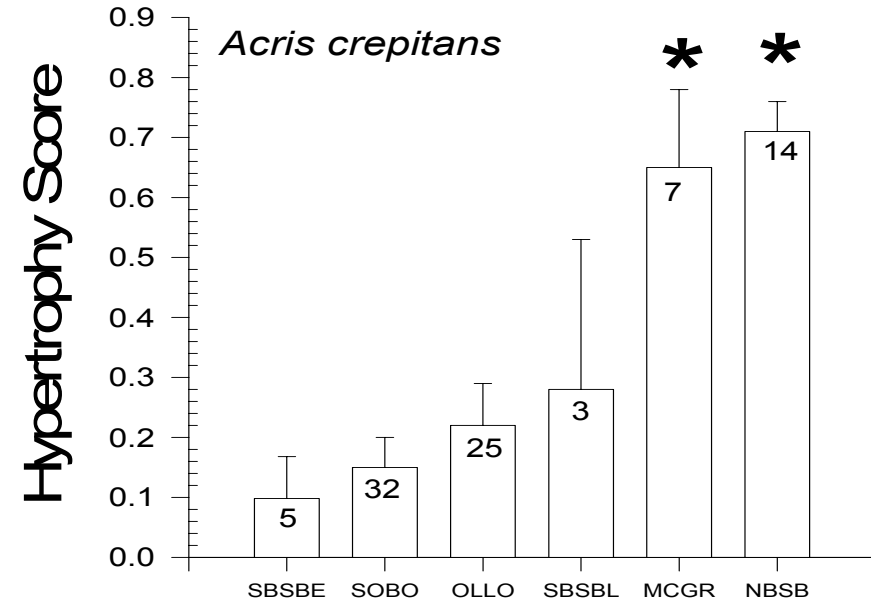




Impacts on Fish and Amphibians

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- Native Frogs and Fish
 - thyroid histology*



Impacts on Fish and Amphibians

Current Focus

- ***Continue thyroid histopathological assessment***
- ***Frog development in water from study area***
- ***Perchlorate in edible fish tissues***

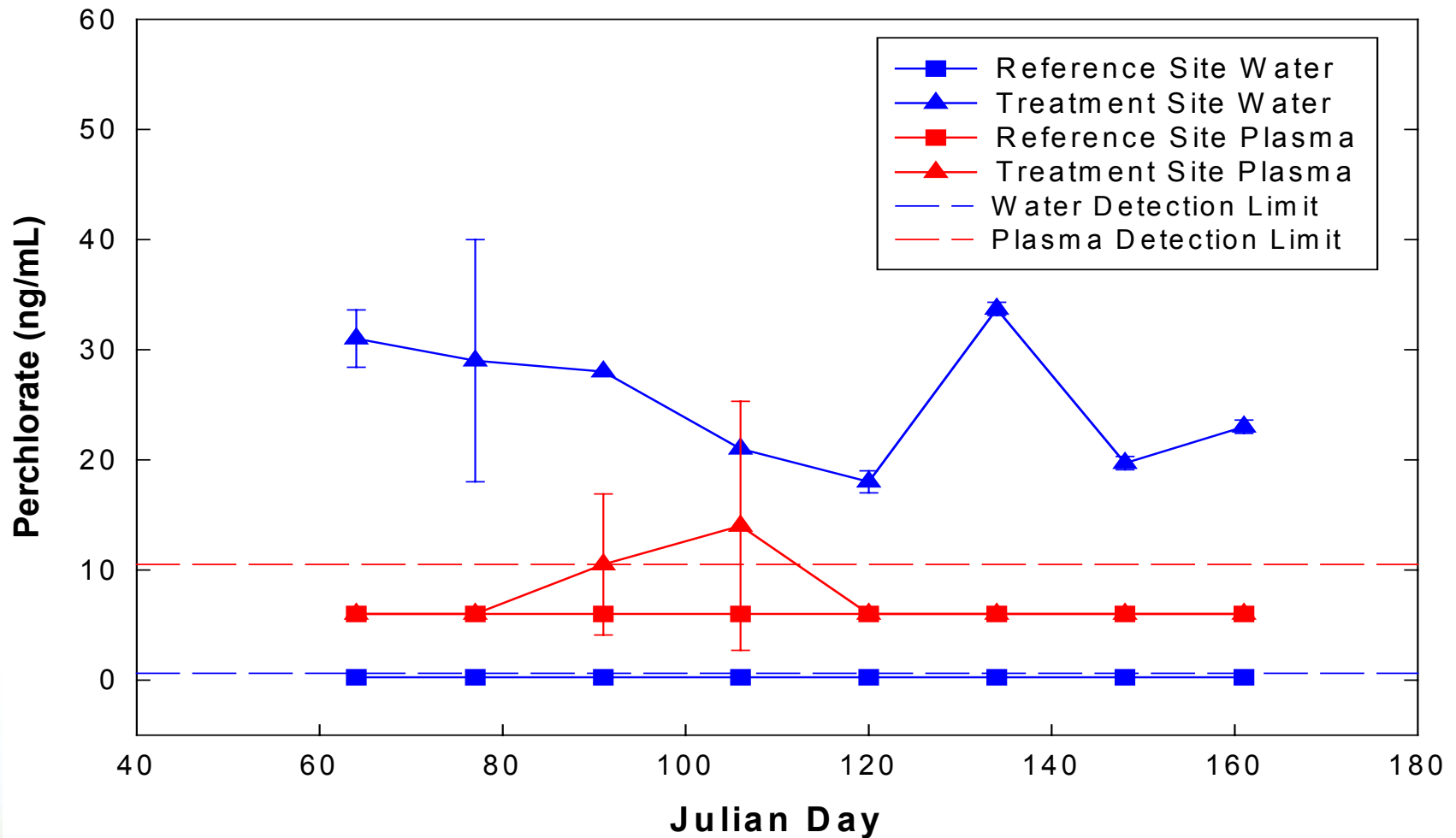


Impacts on Mammals and Birds

- **Small Mammals**
 - *significant exposure risk*
- **Medium Mammals**
 - *no exposure*
- **Small Birds**
 - *perchlorate is present*
- **Tissue Distribution**
 - *no definite pattern*



Impacts on Large Mammals



Impacts on Mammals and Birds

Current Focus

- ***Laboratory tissue distribution studies***
- ***Potential impacts on thermal regulation***



Model Long-Term Exposure and Effects

- **Exposure and Effects Simulations**

